

factors, such as pedestrian and vehicular traffic, may obscure crawls, and result in nests being destroyed because they were missed during a nesting survey and egg relocation program; (2) the total number of hatchlings per undiscovered nest is unknown; (3) the reduction in percent hatching and emerging success per relocated nest over the natural nest site is unknown; (4) an unknown number of females may avoid the project beach and be forced to nest in a less than optimal area; (5) lights may misdirect an unknown number of hatchlings and cause death; and (6) escarpments may form and cause an unknown number of females from accessing a suitable nesting site. However, the level of take of these species can be anticipated by the disturbance of renourishment on suitable turtle nesting beach habitat because: (1) turtles nest within the project site; (2) beach renourishment will likely occur during a portion of the nesting season; (3) the renourishment project will modify the incubation substrate, beach slope, and sand compaction; and (4) artificial lighting will deter and/or misdirect nesting females and hatchlings.

EFFECT OF THE TAKE

In the accompanying Biological Opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species. Critical habitat has not been designated in the project area; therefore, the project will not result in destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of loggerhead, green, leatherback, and Hawksbill sea turtles.

1. Beach quality sand suitable for sea turtle nesting, successful incubation, and hatchling emergence must be used on the project site.
2. If the beach nourishment project is to be conducted during the sea turtle nesting season, surveys for nesting sea turtles must be conducted. If nests are constructed in the area of beach nourishment, the eggs must be relocated.
3. Immediately after completion of the beach nourishment project and prior to the next three nesting seasons, beach compaction must be monitored and tilling must be conducted as required to reduce the likelihood of impacting sea turtle nesting and hatching activities.
4. Immediately after completion of the beach nourishment project and prior to the next three nesting seasons, monitoring must be conducted to determine if escarpments are present and escarpments must be leveled as required to reduce the likelihood of impacting sea turtle nesting and hatching activities.
5. The project sponsor must ensure that contractors conducting the beach renourishment and associated activities fully understand the sea turtle protection measures detailed in this incidental take statement.

6. During the sea turtle nesting season, all construction equipment and materials must be stored in a manner that will minimize impacts to sea turtles to the maximum extent practicable.

7. During the sea turtle nesting season, lighting associated with the project must be minimized to reduce the possibility of disrupting and misdirecting nesting and hatchling sea turtles.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the Corps must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

1. All fill material placed on the beach must be analogous to that which naturally occurs within the project location or vicinity in quartz to carbonate ratio, color, median grain size and median sorting. Specifically, such material shall be predominately of carbonate, quartz or similar material with a particle size distribution ranging between 0.62 mm and 4.76 mm (classified as sand by either the Unified Soil Classification System or the Wentworth classification). The material shall be similar in color and grain size distribution (sand grain frequency, mean and median grain size, and sorting coefficient) to the material in the existing coastal system at the disposal site and shall not contain:

- greater than five percent, by weight, silt, clay, or colloids passing the #230 sieve;
- greater than five percent, by weight, fine gravel retained on the #4 sieve;
- coarse gravel, cobbles, or material retained on the 3/4 inch sieve in a percentage or size greater than found on the native beach;
- construction debris, toxic material, or other foreign matter; and
- not result in cementation of the beach.

These standards must not be exceeded in any 1000 square foot section, extending through the depth of the renourished beach. If the natural beach exceeds any of the limiting parameters listed above, then the fill material must not exceed the naturally occurring level for that parameter.

2. Daily early morning surveys for sea turtle nests will be required if any portion of the beach nourishment project and berm construction project occurs during the period from April 1 through November 30. Nesting surveys must be initiated 65 days prior to nourishment or construction activities or by April 1, whichever is later. Nesting surveys must continue through the end of the project or through September 30, whichever is earlier. If nests are constructed in areas where they may be affected by beach nourishment activities, eggs must be relocated per the following requirements.

2a. Nesting surveys and egg relocations will only be conducted by personnel with prior experience and training in nesting survey and egg relocation procedures. Surveyors must have a valid Florida Fish and Wildlife Conservation Commission permit. Nesting surveys

must be conducted daily between sunrise and 9 a.m. Surveys must be performed in such a manner so as to ensure that beach nourishment activity does not occur in any location prior to completion of the necessary sea turtle protection measures.

2b. Only those nests that may be affected by construction activities will be relocated. Nests requiring relocation must be moved no later than 9 a.m. the morning following deposition to a nearby self-release beach site in a secure setting where artificial lighting will not interfere with hatchling orientation. Nest relocations in association with construction activities must cease when construction activities no longer threaten nests. Nests deposited within areas where construction activities have ceased or will not occur for 65 days must be marked and left in place unless other factors threaten the success of the nest. Any nests left in the active construction zone must be clearly marked, and all mechanical equipment must avoid nests by at least 10 feet.

3. Immediately after completion of the beach nourishment project and prior to April 1 for three subsequent years, sand compaction must be monitored in the area of restoration in accordance with a protocol agreed to by the Service, the State regulatory agency, and the applicant. At a minimum, the protocol provided under 3a and 3b below must be followed. If required, the area must be tilled to a depth of 36 inches. All tilling activity must be completed prior to April 1. If the project is completed during the nesting season, tilling will not be performed in areas where nests have been left in place or relocated. An annual summary of compaction surveys and the actions taken must be submitted to the Service. (NOTE: The requirement for compaction monitoring can be eliminated if the decision is made to till regardless of post-construction compaction levels. Also, out-year compaction monitoring and remediation are not required if placed material no longer remains on the dry beach.)

3a. Compaction sampling stations must be located at 500-foot intervals along the project area. One station must be at the seaward edge of the dune/bulkhead line (when material is placed in this area), and one station must be midway between the dune line and the high water line (normal wrack line).

At each station, the cone penetrometer will be pushed to a depth of 6, 12, and 18 inches three times (three replicates). Material may be removed from the hole if necessary to ensure accurate readings of successive levels of sediment. The penetrometer may need to be reset between pushes, especially if sediment layering exists. Layers of highly compact material may lay over less compact layers. Replicates will be located as close to each other as possible, without interacting with the previous hole and disturbed sediments. The three replicate compaction values for each depth will be averaged to produce final values for each depth at each station. Reports will include all 18 values for each transect line, and the final 6 averaged compaction values.

3b. If the average value for any depth exceeds 500 pounds per-square inch (psi) for any two or more adjacent stations, then that area must be tilled immediately prior to April 1. If values exceeding 500 psi are distributed throughout the project area but in no case do those values

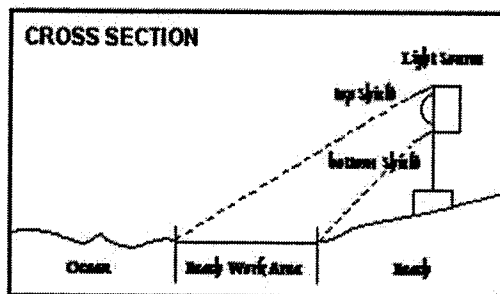
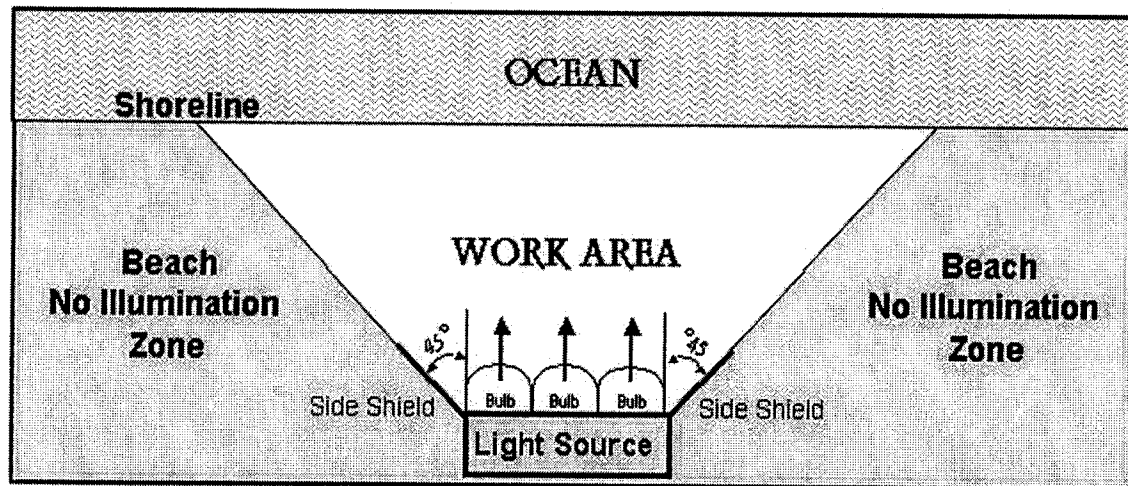
exist at two adjacent stations at the same depth, then consultation with the Service will be required to determine if tilling is required. If a few values exceeding 500 psi are present randomly within the project area, tilling will not be required.

4. Visual surveys for escarpments along the project area must be made immediately after completion of the beach nourishment project and prior to April 1 for three subsequent years. Escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet must be leveled to the natural beach contour by April 1. If the project is completed during the sea turtle nesting and hatching season, escarpments may be required to be leveled immediately, while protecting nests that have been relocated or left in place. The Service must be contacted immediately if subsequent reformation of escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet occurs during the nesting and hatching season to determine the appropriate action to be taken. If it is determined that escarpment leveling is required during the nesting or hatching season, the Service will provide a brief written authorization that describes methods to be used to reduce the likelihood of impacting existing nests. An annual summary of escarpment surveys and actions taken must be submitted to the Service. (NOTE: Out-year escarpment monitoring and remediation are not required if placed material no longer remains on the beach.)

5. The applicant must arrange a meeting between representatives of the contractor, the Service, the FWC, and the permitted person responsible for nest marking and egg relocation at least 30 days prior to the commencement of work on this project. At least 10 days advance notice must be provided prior to conducting this meeting. This will provide an opportunity for explanation and clarification of the sea turtle protection measures.

6. From April 1 through November 30, staging areas for construction equipment must be located off the beach to the maximum extent practicable. Nighttime storage of construction equipment and berm construction materials not in use must be off the beach to minimize disturbance to sea turtle nesting and hatching activities. In addition, all construction pipes and other construction materials that are placed on the beach must be located as far landward as possible without compromising the integrity of the existing or reconstructed dune system. Temporary storage of pipes and berm construction materials must be off the beach to the maximum extent possible. Temporary storage of pipes on the beach must be in such a manner so as to impact the least amount of nesting habitat and must likewise not compromise the integrity of the dune systems (placement of pipes perpendicular to the shoreline is recommended as the method of storage).

7. During sand placement, from April 1 through November 30, direct lighting of the beach and near shore waters must be limited to the immediate construction area and must comply with safety requirements. Lighting on offshore or onshore equipment must be minimized through reduction, shielding, lowering, and appropriate placement to avoid excessive illumination of the waters surface and nesting beach while meeting all Coast Guard, EM 385-1-1, and OSHA requirements. Light intensity of lighting plants must be reduced to the minimum standard required by OSHA for General Construction areas, in order not to mis-direct sea turtles. Shields must be affixed to the light housing and be large enough to block light from all lamps from being



**BEACH LIGHTING
SCHEMATIC**

transmitted outside the construction area (see figure below).

8. No permanent exterior lighting will be installed in association with this construction project.
9. A report describing the actions taken to implement the terms and conditions of this incidental take statement must be submitted to the South Florida Ecological Services Office within 60 days of completion of the proposed work for each year when the activity has occurred. This report will include the dates of actual construction activities; names and qualifications of personnel involved in nest surveys, marking, and relocation activities; descriptions and locations of self-release beach sites; nest survey, marking, and relocation results; and hatching and emerging success of nests.
10. In the event a sea turtle nest is excavated during construction activities, the permitted person responsible for nest marking and egg relocation for the project must be notified so the eggs can be moved to a suitable relocation site.

11. Upon locating a sea turtle adult, hatchling, or egg harmed or destroyed as a direct or indirect result of the project, notification must be made to the FWC, Bureau of Marine Enforcement (formerly the Florida Marine Patrol) at 800-342-5367. Care should be taken in handling injured turtles or eggs to ensure effective treatment or disposition, and in handling dead specimens to preserve biological materials in the best possible state for later analysis.

The Service believes that incidental take will be limited to the 2,600 feet of beach that have been identified as the project area which includes sand placement and berm construction. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. The Service believes that no more than the following types of incidental take will result from the proposed action: (1) destruction of all nests that may be constructed and eggs that may be deposited and missed by a nest survey and marking program within the boundaries of the proposed project; (2) destruction of all nests deposited during the period when a nest survey and marking program is not required to be in place within the boundaries of the proposed project; (3) reduced hatching success due to egg mortality during relocation and adverse conditions at the location site; (4) harassment in the form of disturbing or interfering with female turtles attempting to nest within the project construction area or on adjacent beaches as a result of construction activities; (5) disorientation of hatchling turtles on beaches adjacent to the construction area as they emerge from the nest and crawl to the water as a result of project lighting; (6) behavior modification of nesting females due to escarpment formation within the project area during a nesting season, resulting in false crawls or situations where they choose marginal or unsuitable nesting areas to deposit eggs; and (7) destruction of nests from escarpment leveling within a nesting season when such leveling has been approved by the Fish and Wildlife Service. The amount or extent of incidental take for sea turtles will be considered exceeded if the project results in more the placement of sand at more than a five year interval on the 2,600 feet of beach proposed for beach renourishment. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Corps must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. Construction activities for this project and similar future projects should be planned to take place outside the sea turtle nesting and hatching season.

2. Appropriate native salt-resistant dune vegetation should be established on restored dunes. The Florida Department of Environmental Protection's (DEP) Office of Beaches and Coastal Systems can provide technical assistance on the specifications for design and implementation.
3. Surveys for nesting success of sea turtles should be continued for a minimum of three years following project construction to determine whether sea turtle nesting success has been adversely impacted.
4. Educational signs should be placed where appropriate at beach access points explaining the importance of the area to sea turtles and the life history of sea turtle species that nest in the area.
5. The silt size fraction of the sediments in the ebb shoal exceed Florida's 5 percent standard (percent by weight passing the 230 sieve; §62B-41.007(2)(j)) within four cores. Core 57 contains 6.00 percent silt at 4.5 feet; core 58 contains 5.19-9.34 percent silt at 3-11 feet depth; core 59 contains 11.32 percent silt at 9 feet; and core 61 contains 12.30 percent silt at 9.3 feet depth. The Service recommends that these areas be avoided, and be verified that the Corps' provision to not remove sediments within 2 feet of unsuitable material is met at the locations of these cores (Corps 1997). Avoidance of these sedimentary layers would also avoid the gravelly layer in core 59.

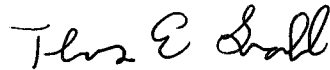
In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.


REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the action outlined in the request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Should you have additional questions or require additional clarification regarding this matter, please contact Andrew Gude at (305) 872-5563.

Sincerely yours,

A handwritten signature in black ink, appearing to read "James J. Slack".

 James J. Slack
Field Supervisor
South Florida Ecological Services Office

cc:

Service, Jacksonville, Florida (Sandy MacPherson)

FWC, Tallahassee, Florida (Robbin Trindell)

NMFS, Miami, Florida (Mike Johnson)

NMFS, Protected Resources Division, St. Petersburg, Florida

EPA, West Palm Beach

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DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P. O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

Planning Division
Environmental Branch

MAY 10 2002

Mr. Heinz J. Mueller, Chief
Office of Environmental Assessment
U.S. Environmental Protection Agency
61 Forsyth Street
Atlanta, Georgia 30303-8960

Dear Mr. Mueller:

This references the Dade County Beach Erosion Control and Hurricane Protection Project and your letter dated March 26, 2002, providing comments on the Draft Environmental Assessment for the proposed renourishment at Haulover Beach Park.

Our responses to those comments are provided in the enclosure to this letter. If you have any questions, please contact Mr. Mike Dupes at 904-232-1689 or email at michael.dupes@saj02.usace.army.mil.

Sincerely,

George M. Strain
Acting Chief, Planning Division

Enclosure

Copy Furnished:

Mr. Richard Harvey, U.S. Environmental Protection Agency, South Florida Office,
400 North Congress Avenue, Suite 120, West Palm Beach, Florida 33401

**Responses to EPA's comments on the
Draft Environmental Assessment for the Proposed
Renourishment at Haulover Beach Park**

Comment 1. Page 1, Description of Proposed Action 1.4. From a cost perspective use of the ebb shoal at Bakes Haulover Inlet as a sand source is appealing given its proximity. However, the borrow area is only in 10-20' of water; hence we are concerned about how the removal of 114,100 cubic yards of material from just offshore will affect adjacent transport processes. We understand that some shoal will remain to provide wave refraction, but this action could well be a short-term "fix" which results in a long-term problem.

Response: According to the "Dade County Regional Sediment Budget" (CSI, Inc, 1997) an average of 60,000 cubic yards per year (cy/yr) is transported southward along the Haulover Beach shoreline and is delivered to the vicinity of Bakers Haulover Inlet. Due to the existing obstructions to littoral transport created by the two jetties and navigation channel at Bakers Haulover Inlet, only 19,000 cy/yr bypasses the inlet to the south. The strong tidal currents, which run through Bakers Haulover Inlet, divert a large percentage of sediment transported into the inlet to the ebb and flood shoals. An estimated 9,000 cy/yr is transported into the interior channels of the inlet by the flood tidal currents, and during periodic maintenance dredging of these channels this material is usually placed on the Bal Harbor shoreline to the south of the inlet, supplementing the small volume of naturally bypassed material. Approximately 32,000 cy/yr is transported by ebb tidal currents offshore into the ebb shoal system.

Evidence suggests that the majority of sediment transported southward along the coast moves within the surf zone, well landward of the ebb shoal. The landward edge of the ebb shoal is separated from the shoreline by a distance of about 1500 feet, and water depths between the shoal and the shoreline approach 20 feet. Since the depth of closure (minimal sediment transport) is generally regarded as being about -18 feet, it is unlikely that a significant portion of the southward-moving sediment along the Dade County shoreline is transported directly into the ebb shoal by littoral processes alone, and sediment within the ebb shoal may be regarded as being outside of the littoral system. Previous studies and analysis of recent bathymetric data suggest that the primary mechanism for sediment transport into the ebb shoal is by the offshore-directed transport of sediment entering the inlet along the shoreline, and then being transported offshore by the strong ebb tidal currents through the inlet.

As stated above, approximately 32,000 cy/yr (53 percent of annual net transport volume) is transported offshore by tidal currents through the inlet and deposited in the ebb shoal, where it is effectively removed from the littoral system. Due to the presence of the channel and associated strong tidal currents south of the ebb shoal, very little material is transported naturally from the ebb shoal southward onto the beaches south of the inlet (Bakers Haulover Inlet Management Plan, CP&E, 1995). Periodic use of the

ebb shoal as a borrow source can re-introduce some of this material into the littoral system, but it is important to allow a large portion of the ebb shoal to remain in place to avoid significant impacts to the wave sheltering and wave refraction properties provided by the shoal.

It is anticipated that the shoal will continue to accrete at an average rate of about 32,000 cy/yr, with or without project construction. The volume excavated for the proposed renourishment will therefore be replaced within 4 years.

Comment 2. Page 8, Alternatives 2.1.1. States no hardgrounds are located within the borrow area, and no hardgrounds occur within 200 feet of the eastern tip of the borrow area. EPA recommends that a 400-foot buffer zone be placed between the borrow area and any nearby hardbottom reefs.

Response: The boundary of the borrow area has been adjusted to provide a 400-foot buffer zone from any hardbottom habitat.

Comment 3. Page 10, Table 1: Summary of Direct and Indirect Impacts for Alternatives Considered. Under proposed EBB Shoal Borrow Area (Row 2, Column 3) there is the statement that no impact(s) to hardground communities are expected, rather it should state the same effects as listed under alternative Borrow Areas South of Government Cut (potential sedimentation, turbid, and mechanical impacts).

Response: Concur, the table has been revised.

Comment 4. Page 18, Beach Renourishment Activities: States minimal impacts to nearshore hardbottom communities are expected by sand placement (i.e. disposal) on the beach due to the distance of the reefs to the shore. In conjunction with the Coast of Florida Erosion and Storm Effects Study, the hardground areas of Dade County were mapped using side scan sonar. In addition, aerial photography flown in July 1997 has also been used to map the nearshore hardground. The closest hardground community in the vicinity of the proposed beach fill at Haulover Beach Park is in excess of 800 feet. EPA requests that the U.S. Army Corps of Engineers conduct a new hardbottom resource survey of the borrow area areas and beach renourishment site. Information provided in the Coast of Florida Study and review of 1997 aerial photography may not accurately portray present site conditions. The Coast of Florida Study was not designed or intended to identify the hardbottom resources along the coast. The EA should also include a map and description of the hardbottom resources located within the project boundaries.

Response: Based on comparisons of the 1997 aerial photography with diver verifications of the shoreward edge of the nearshore reef during the planning of recent past renourishments and the recent construction of the breakwaters at Sunny Isles, the

Corps is satisfied that the 1997 aerial photography does accurately portray the location of the nearshore reef. A map showing the location of the nearshore reef relative to the beach fill area will be included in the final EA.

Comment 5. The EA needs to address the long-term management of the proposed project.

Response: The long term management plan for the project is based upon the approved General Design Memorandum (revised 1/8/76) and FEIS (April 1975), subsequent NEPA documents and the cost sharing agreements executed with Metropolitan Dade County, the project sponsor. Since implementation of Programs and Project Management Division in the Jacksonville District of USACE in the late 1980's, the management of the project has been supported by monthly Project Review Board briefings and updates of the Project Management Board milestone schedules. Monthly conference calls/team meetings with the sponsor have been implemented since the mid 1990's in order to coordinate this project's management on a monthly (and sometimes weekly) basis. As renourishments of portions of the overall project become needed, close coordination is maintained with the other Federal agencies during NEPA coordination in order that all NEPA requirements are known and addressed (and shown as part of the milestone schedules) during the preparation of the documents for the upcoming renourishment contracts. The overall project management plan is to continue to provide for the renourishment of the project throughout project life by the above process.

Comment 6. Suggest the characterization, hardbottom, replace hardground in subsequent documents.

Response: Noted.



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P. O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

Planning Division
Environmental Branch

MAY 01 2002

Mr. Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division
National Marine Fisheries Service
9721 Executive Center Drive North
St. Petersburg, Florida 33702

Dear Mr. Mager:

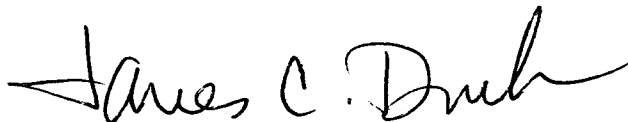
This references the proposed renourishment at Haulover Beach Park, Dade County Beach Erosion Control and Hurricane Protection Project and your letter dated April 4, 2002, providing Essential Fish Habitat (EFH) Conservation Recommendations. This letter serves as our response under Section 305(b)(4) of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA).

We have reviewed the EFH Conservation Recommendations and concur with your recommendations.

1. Conservation Recommendation 1. The proposed ebb shoal borrow area has been modified to removed the eastern section to provide, at a minimum, a 400-foot-wide buffer area between the borrow area and adjacent hardbottom areas and reefs.
2. Conservation Recommendation 2. Extensive turbidity and sedimentation monitoring and assessment will occur prior to, during and following project construction. Turbidity monitoring for the borrow area and the beach fill area is detailed in the Water Quality Certification (0128781-00-JC) issued on July 27, 2001 by the Florida Department of Environmental Protection (FDEP) and in the U.S. Army Corps of Engineers Contract Plans and Specifications for the project. Sedimentation monitoring of hardbottom/reef areas adjacent to the borrow area will be conducted by the Miami-Dade Department of Environmental Resources Management (DERM). A biological monitoring plan is currently being prepared by DERM and will be similar to the monitoring conducted for the recent renourishments at Sunny Isles and Miami Beach in the vicinity of 63rd Street. The monitoring plan will include both visual surveys of the adjacent reef areas, as well as measuring sediment depths and sedimentation rates.
3. Conservation Recommendation 3. If monitoring indicates that adverse impacts to hardbottom communities have occurred, a mitigation plan will be developed to compensate for those impacts.

If you have any questions or need further information, please contact Mr. Mike Dupes at 904-232-1689.

Sincerely,

A handwritten signature in black ink, reading "James C. Duck". The signature is fluid and cursive, with the first name "James" being the most prominent.

James C. Duck
Chief, Planning Division

Copy Furnished:

Mr. David H. Rackly, National Marine Fisheries Service, 219 Fort Johnson Road,
Charleston, South Carolina 29412-9110

Mr. Michael Johnson, National Marine Fisheries Service, 11420 North Kendall Drive,
Miami, Florida 33176

Mr. Steve Blair, Dade County Department of Environmental Resources Management,
33 SW 2nd Avenue, Suite 1000, Miami, Florida 33130



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

April 4, 2002

James C. Duck, Chief
Planning Division, Environmental Branch
Department of the Army, Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232 0019

Dear Mr. Duck:

This responds to your March 7, 2002, request for comments on the draft **Environmental Assessment (EA) for the proposed Renourishment of Haulover Beach Park** in Dade County, Florida. According to your letter, the EA provides your Essential Fish Habitat (EFH) Assessment for the proposed project, as required by the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA).

According to the project description, the proposed action constitutes the second renourishment of Haulover Beach Park and involves placing 114,000 cubic yards of sand along 2,600 linear feet of shoreline. The proposed borrow area for the project is located within the ebb shoal northeast of Bakers Haulover Inlet in 10 to 20 feet of water. Sand material would be dredged from the borrow area using a hydraulic dredge and pumped to the beach disposal site using a submerged pipeline.

The EA includes information regarding existing marine resources in the area of the proposed borrow site and the beach disposal site. According to EA, hard bottom habitat does not occur within the equilibrium toe of the fill or within the proposed pipeline corridor. Although hard bottom habitat is not present within the proposed borrow area, hard bottom reefs have been located approximately 200 feet east of the eastern edge of the borrow area. Since direct impacts to hard bottom resources are not expected, compensatory mitigation is not proposed for the project.

On March 12, 2002, the National Marine Fisheries Service participated in an interagency site inspection of project area. Although hard bottom habitat was not observed within the proposed borrow area or the beach disposal area, hard bottom reefs were found approximately 140 feet east of the eastern edge of the borrow area. These hard bottom reefs appeared to be dominated by sponge and soft corals, and several hard coral colonies were also observed. Discussions with Army Corps



of Engineers (COE) staff indicate that you have recently been made aware of the presence of these resources and, in order to provide an adequate buffer area around the reefs, the COE intends to modify the borrow area.

The proposed project borders and includes areas identified as Essential Fish Habitat (EFH) by the South Atlantic Fishery Management Council (SAFMC). Categories of EFH that occur within the project vicinity include marine water column, live/hard bottoms, coral and coral reefs, algae, and sargassum. Some of the managed species associated with the marine water column include eggs and sub-adult brown and pink shrimp; gag and yellowedge grouper; gray, mutton, lane and schoolmaster snappers; and white grunt. The marine water column and sargassum also have been identified as EFH for pelagic species, including sub-adult/juvenile king and Spanish mackerel, greater amberjack, cobia, and dolphin. Hard bottom/coral reef habitats have been identified as EFH for juvenile and adult gag and yellowedge groupers; and gray and mutton snappers. Sponge, algae, coral and hard bottom habitats have been identified as EFH for juvenile and adult spiny lobster. Likewise, the Mid Atlantic Fishery Management Council (MAFMC) has identified EFH for bluefish, including water column in the project area extending from the coastline to well beyond the construction limits for the project. Detailed information on shrimp, the snapper/grouper complex (containing ten families and 73 species), mackerel, bluefish, dolphin, spiny lobster and other Federally managed fisheries and their EFH is provided in the 1998 generic amendment of the Fishery Management Plans (FMP) for the South Atlantic and Mid Atlantic regions prepared by the SAFMC and MAFMC, respectively. The 1998 amendment was prepared as required by the Magnuson-Stevens Fishery Conservation and Management Act. The NMFS has identified EFH for highly migratory species that utilize the marine water column in this area, including juvenile and adult nurse, lemon, blacktip, great hammerhead, sandbar and bull sharks. In addition, the SAFMC has also designated hard bottom habitat as Habitat Area of Particular Concern (HAPC) for the snapper/grouper complex and spiny lobster, and sargassum for highly migratory pelagic species. HAPCs are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area.

In addition to EFH for Federally managed species, the marine water column, sargassum, hard bottom, coral, and shallow nearshore habitats provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish and shellfish. Species such as blue crab, flounder, pompano, striped mullet, tarpon, and a variety of reef fish and tropical fish are among the many species that utilize these habitats.

The NMFS has reviewed the EA for the proposed project and we find that some information relevant and necessary for our review of the project was not included in the document. In view of the potential adverse effects of this project to EFH, HAPC, and other NOAA trust resources, the NMFS recommends that the following information should be included in the final EA for the proposed project:

- Although relatively detailed information regarding the alternate borrow area (south of Government Cut) is provided, the information pertaining to the proposed borrow area (ebb shoal)

that over 53 percent of the hard coral colonies were killed by sedimentation, equivalent to the loss of 18,279 colonies. Inadequate buffer zones surrounding the borrow areas contributed to the impacts in this project (Blair *et al.* 1990b). Seven years after the completion of the 1971 Hallandale project, persistent turbidity resulted in visibility of less than two meters in the nearshore areas (Courtenay *et al.* 1980). Experimental studies have demonstrated that hard corals are adversely affected at levels below the current Florida administrative threshold of 29 NTUs (Teleniski and Goldberg 1995a; 1995b). In the Bal Harbor project, for example, the turbidity levels were seldom over 3 NTUs, yet 1-5 inches of sediment were deposited over 24.8 acres of hard bottom (Blair *et al.* 1990b). Goldberg (1989) suggested that the minimum distance between the hard bottom area and the borrow site should be the mixing zone dimensions around the dredge head. Use of a hydraulic dredge is proposed for the Haulover Beach project, which should reduce the magnitude and size of turbidity/sediment plumes at the dredge site associated with hopper dredges. However, sediments in this area typically contain high concentrations of soft, calcareous organic material that tends to remain in suspension longer and may travel greater distances. The COE should evaluate these and other relevant publications and reports regarding effects of beach renourishment projects and include these assessments in the final EA.

In view of the potential adverse effects of this project to EFH, HAPC, and other NOAA trust resources, the NMFS provides the following:

EFH Conservation Recommendations

1. The proposed borrow area should be modified to eliminate the eastern “dogleg” section and provide, at a minimum, a 400-foot-wide buffer between the borrow area and adjacent hard bottom reefs.
2. A monitoring plan should be implemented to assess turbidity and sedimentation impacts on adjacent hard bottom reefs. The plan should include monitoring during and after construction and use of fixed and random monitoring stations at the hard bottom reef adjacent to the borrow area. In addition to a photographic record of benthic communities, a quantifiable method of measuring sedimentation on the reef should be used, such as traps or plates, that can be used to determine accumulated sediment on the reef. In addition, indicators of stress or mortality to benthic, sessile organisms should be recorded. Post-construction monitoring events be conducted immediately following, six months, and one year after project completion to assess potential adverse impacts on benthic communities.
3. If monitoring data indicate occurrence of adverse impacts to hard bottom communities, a plan for providing full compensation for unavoidable adverse impacts to hard bottom, coral, and other sensitive nearshore habitats should be developed and made available for NMFS review. The plan should address compensation for the loss productivity and habitat availability incurred during the period between elimination of hard bottom habitat and establishment of a viable replacement reef.